

California Regional Water Quality Control Board  
North Coast Region

Cleanup and Abatement Order No. 98-68

for

Simpson Redwood Company d.b.a. Simpson Timber Company  
Halvorson Properties  
Preston Properties  
1200 West Del Norte Street  
Eureka

Humboldt County

The Regional Water Quality Control Board, North Coast Region, finds that:

1. From the late 1800s through 1968, the site located at 1200 West Del Norte Street has been used variously as a lumber yard, plywood manufacturing, and lumber mill facility (Attachment 1). From 1863 until 1950, Dolbeer and Carson Lumber Company owned the property and operated the site as Eureka Redwood Lumber Company, Mill 4. In 1950, Pacific Lumber Company acquired the property and operated the mill until 1952, when M&M Wood Working Company purchased the property and operated the site as the Eureka Plywood Mill. In 1956, Simpson Redwood Company bought the property and operated the plywood mill. In 1963, Simpson Redwood Company merged with Simpson Timber Company and operated the site as Eureka Plywood until 1968. In 1973, the plywood plant was abandoned and the site was leased to Halvorson Properties until 1975. In 1981, the property was transferred from Simpson Timber Company to Simpson Redwood Company (Simpson Logging Company of Michigan) until 1984 when the property was sold to Halvorson Properties. In 1991, the site was purchased and is currently owned by Preston Properties. Automobile repair, storage yards, retail sales, and similar small businesses have also operated at the site since 1975 under leases from the various property owners.
2. The plywood operations between 1955 and 1968 consisted of bringing logs to the log pond, which was an embayment of Humboldt Bay, and cutting the logs into blocks, then steaming and peeling the blocks into veneer. The veneer was coated with glue and stacked into the desired panel thickness then compressed and heated until cured. The finished panels were edge sprayed with a solvent-based edge seal or coated with a fungicide/water repellent, called Woodlife, or sent directly to the shipping/warehouse area for distribution. Woodlife contained pentachlorophenol (PCP) in mineral spirits (a petroleum based solvent).

3. Phenol-formaldehyde resin was the adhesive glue most extensively used in the manufacture of plywood at the site. Phenol-formaldehyde resin was dissolved in solvents and mixed onsite during some operational periods using methanol, acetone, or similar solvents. Phenol-formaldehyde resin was delivered to the site pre-mixed (dissolved in solvents) during operations by Simpson Timber Company.
4. Petroleum products and lubricants were used in the machinery for operations at the site. The petroleum products include gasoline, diesel, waste oil, panel oil, other chemical wastes, and solvents.
5. Since 1989, several investigations have documented discharges to the environment. Laboratory analysis results from soil samples collected at the site have detected levels of formaldehyde, phenol, Total Petroleum Hydrocarbons as diesel (TPH-d), Total Petroleum Hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, Total Petroleum Hydrocarbons as motor oil, pentachlorophenol, tetrachlorophenol, arsenic, barium, cadmium, chromium, copper, lead, manganese, nickel, vanadium, zinc, and the polynuclear aromatic hydrocarbons (PAH) identified as benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, benzo(g,h,i)perylene, indeno(1,2,3-cd) pyrene, naphthalene, phenanthrene, fluorene, acenaphthene, fluoranthene, anthracene, chrysene, and pyrene. Regional Water Board staff observed separate phase petroleum hydrocarbon product floating on the groundwater surface in an excavation trench in Area 6. These chemicals are associated with past operations of the facility for wood manufacturing and other site uses.
6. Since 1989, limited groundwater samples have been collected from trenches, borings, and monitoring wells and analyzed in a laboratory from various portions of the site. Dissolved concentrations of TPH-d, TPH-g, PCP, lead, and benzene have been detected in these samples.
7. In April of 1996, Regional Water Board staff collected sediment samples from the site. Toluene, pyrene, fluoranthene, and chrysene, were detected in Humboldt Bay sediment samples collected adjacent to the site. PCP was detected in sediment samples in a surface water channel. One likely mode of deposition for the contaminants into the bay sediments and the surface water channel is storm water runoff from the site.
8. On September 18, 1996 Regional Water Board staff concurred with the Interim Remedial Action Plan developed by Geomatrix and submitted on behalf of Simpson Redwood Company. The plan includes several phases of work: 1) the Interim Remedial Measures for Head Works (Area 1, 2) Woodlife Pipeline area (Area 6), and (Area 3) installation of a monitoring well in Area 7-Underground Storage Tank to verify the attenuation of petroleum constituents. The Woodlife Pipeline area has been completed.
9. Simpson Redwood Company is currently investigating and remediating discharges to the environment that occurred during operations at the site prior to 1968. Preston Properties is also investigating current discharges to the environment associated with operations

since 1991. Halvorson Properties previously investigated discharges associated with a former underground storage tank. Simpson Redwood Company d.b.a. Simpson Timber Company, Halvorson Properties, and Preston Properties are hereinafter referred to as the discharger.

10. The site overlies shallow groundwaters, with groundwater less than four feet below the ground surface, and these groundwaters may be in continuity with surface waters of Humboldt Bay.
11. The depth to groundwater of the first transmissive zone is very shallow, approximately four to eight feet deep beneath the site. Pursuant to the North Coast Region's Water Quality Control Plan and State Water Resources Control Board Resolution 88-63, the beneficial uses of areal groundwaters include:
  - a. domestic water supply
  - b. agricultural supply
  - c. industrial supply
12. The beneficial uses of Humboldt Bay include:
  - a. industrial supply
  - b. navigation
  - c. water contact recreation
  - d. non-contact water recreation
  - e. ocean commercial and sport fishing
  - f. saline water habitat
  - g. wildlife habitat
  - h. preservation of rare and endangered species
  - i. marine habitat
  - j. fish migration
  - k. fish spawning
  - l. shellfish harvesting
13. The dischargers named in this Order have caused or permitted, cause or permit, or threaten to cause or permit waste to be discharged where it is, or probably will be, discharged into waters of the State and create, or threaten to create, a condition of pollution or nuisance. The discharge or threatened discharge of petroleum hydrocarbons, volatile organics, semivolatile organics, metals, and other chemicals has unreasonably affected water quality in that the discharge or threatened discharge are deleterious to the above described beneficial uses of groundwater, and have impaired water quality to a degree which creates a threat to public health and public resources and therefore, has created a condition of pollution and nuisance which threatens to continue unless the discharge or threatened discharge is permanently cleaned up and abated.

14. The California Water Code, and regulations and policies developed thereunder, require cleanup and abatement of discharges and threatened discharges of waste to the extent feasible. Cleanup and abatement activities are to provide attainment of background levels of water quality, or the highest water quality which is reasonable if background levels of water quality cannot be restored. Alternative cleanup levels less than background shall be consistent with maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in water quality less than that prescribed in the Water Quality Control Plans and Policies adopted by the State and Regional Water Boards.
15. Other than metals, constituents of concern at the site do not occur naturally in background groundwaters or surface waters. Accordingly, the minimum levels of detection for petroleum hydrocarbons, volatile organics, semivolatile organics and other chemicals are established as the background level. Background levels for metals in soils, groundwater, and surface water have been established based on site sampling data. Background levels can be revised, if needed, based on additional, site-specific information.
16. Water Quality Objectives exist to ensure protection of the beneficial uses of water. The highest beneficial use to be protected at or near the site is domestic water supply. However, other beneficial uses of water exist, and the most stringent objective for protection of all beneficial uses is selected as the protective water quality. This area is along Humboldt Bay, and some groundwaters may experience salinity impacts, which would be considered in reviewing cleanup criteria and a reasonable time to achieve water quality objectives. Alternative cleanup and abatement actions need to be considered that evaluate the feasibility of, at a minimum: (1) cleanup to background levels, (2) cleanup to levels attainable through application of best practicable technology, and (3) cleanup to protective water quality objective levels. The following table sets out the protective water quality objective.

Constituent of Concern	Background Level ug/l	Water Quality Objective ug/l	Reference for Objective
formaldehyde	<20	20	California Department of Health Services (DHS) Maximum Contaminant Level (MCL), Title 22 of the California Code of Regulations, § 64444 is 1,000 ug/l. California Proposition 65 regulatory level of 20 ug/l as a water quality criterion applied to the narrative TOXICITY water quality objective in the Water Quality Control Plan for the North Coast Region (Basin Plan)
phenol	≤2	5	California DHS Action Level for taste and odor applied to the narrative TASTE and ODOR objective in the Basin

Constituent of Concern	Background Level ug/l	Water Quality Objective ug/l	Reference for Objective
			Plan
Total Petroleum Hydrocarbons as gasoline (TPH-g)	$\leq 50.0$	50.0	Published literature provides a taste and odor threshold of 5 ug/l which is applied to the narrative TASTE and ODOR objective of the Basin Plan, but detection limit is 50 ug/l and is controlling
Total Petroleum Hydrocarbons as diesel (TPH-d)	$\leq 50.0$	56.0	USEPA health advisory of September 4, 1992, Suggested No Adverse Response Level of 56 ug/l which is applied to narrative TOXICITY water quality objective in the Basin Plan
Total Petroleum Hydrocarbons as motor oil	$\leq 50.0$	50.0	U.S. EPA National Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, May 1, 1986. SNARL of 0.1 ug/l to 1.0 ug/l is applied to the narrative TOXICITY objective in the Basin Plan and Oil and Grease criteria of the Basin Plan, but detection limit is 50 ug/l and is controlling
benzene	$\leq 0.5$	1.0	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 1.0 ug/l; USEPA health advisory for cancer risk is 0.7 ug/l; applied to the narrative TOXICITY objective in the Basin Plan
toluene	$\leq 0.5$	42	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 150 ug/l; USEPA taste and odor threshold of 42 ug/l, Federal Register 54(97):22064-22138; applied to the TASTE AND ODOR water quality objective in the Basin Plan
ethylbenzene	$\leq 0.5$	29	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 700 ug/l; USEPA taste and odor threshold, Federal Register 54(97):22064-22138; applied to the TASTE AND ODOR water quality objective in the Basin Plan
arsenic	$\leq 2.5$	5	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 50 ug/l; California Proposition 65 regulatory level of 5 ug/l as a water quality criterion applied to the TOXICITY water quality objective in the Basin Plan

Constituent of Concern	Background Level ug/l	Water Quality Objective ug/l	Reference for Objective
barium	$\leq 100$	490	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 1,000 ug/l; U.S. EPA Integrated Risk Information System (IRIS) Reference Dose as a Water Quality Criterion of 490 ug/l is applied to the narrative TOXICITY objective in the Basin Plan
cadmium	$\leq 2.5$	5.0	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is applied to the narrative TOXICITY objective in the Basin Plan
chromium	$\leq 5$	50	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is applied to the narrative TOXICITY objective in the Basin Plan
copper	$\leq 10$	1000	California DHS secondary MCL, Title 22 of the California Code of Regulations, § 64444.9 is applied to the narrative TASTE AND ODOR objective in the Basin Plan
lead	$\leq 15$	15	U.S. EPA primary Maximum Contaminant Level for the Protection of Domestic Drinking Water is applied to the narrative TOXICITY objective in the Basin Plan
manganese	$\leq 10$	50	California DHS secondary MCL Title 22 of the California Code of Regulations, § 64444.9 is applied to the narrative TOXICITY objective in the Basin Plan
nickel	$\leq 50$	100	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is applied to the narrative TOXICITY objective in the Basin Plan
vanadium	$\leq 49$	49	U.S. EPA Integrated Risk Information System (IRIS) Reference Dose as a Water Quality Criterion is applied to the narrative TOXICITY objective in the Basin Plan.
zinc	$\leq 10$	5000	California DHS secondary MCL, Title 22 of the California Code of Regulations, § 64444.9 is applied to the narrative TASTE AND ODOR

Constituent of Concern	Background Level ug/l	Water Quality Objective ug/l	Reference for Objective
			objective in the Basin Plan
pentachlorophenol (PCP)	$\leq 0.2$	0.3	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 1 ug/l, the USEPA SNARL of 0.3 ug/l is applied to the narrative TOXICITY objective in the Basin Plan
tetrachlorophenol	$\leq 0.2$	1	Taste and odor threshold per USEPA Red Book applied to the TASTE AND ODOR water quality objective in the Basin Plan
Total Petroleum Hydrocarbons as mineral spirits	$\leq 50$	*to be determined	
polynuclear aromatic hydrocarbons (PAH)	$\leq 0.0028$	0.0028 <sup>1</sup>	U.S. EPA Human Health Protection for Sources of Drinking Water is applied to the narrative TOXICITY objective in the Basin Plan

17. This enforcement action is being taken for the protection of the environment and to enforce a general standard as set forth in the Basin Plan. Therefore, this enforcement action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et. seq.) in accordance with Section 15321, Chapter 3, Title 14, California Code of Regulations.

THEREFORE, IT IS HEREBY ORDERED that pursuant to California Water Code Sections 13267 and 13304, Simpson Redwood Company d.b.a. Simpson Timber Company, Halvorson Properties, and Preston Properties shall cleanup and abate the discharge and threatened discharge of petroleum hydrocarbons, volatile organics, semivolatile organics, metals, other chemicals, and other wastes discharged to waters of the state or deposited where they probably will be discharged to waters of the state, and shall comply with the provisions of this order.

1. The dischargers shall conduct the investigation and cleanup tasks under the direction of a California registered geologist or registered civil engineer experienced in the area of groundwater pollution cleanup.
2. The dischargers shall take no action that causes or permits or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be discharged to waters of the state.

<sup>1</sup> For sum of acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, fluorene, indeno(1,2,3-c,d)pyrene, phenanthrene, and pyrene.

3. The dischargers shall submit the time schedule for the completion of the Interim Remedial Action Plan for the Head Works (Area 1) developed by Geomatrix to the Executive Officer on or before January 4, 1999.
4. The dischargers shall submit the report of field work completed under Provision 3 to the Executive Officer within 90 days from completion of field work.
5. The dischargers shall submit the time schedule for implementation of the approved workplan to install a monitoring well in Area 7 - Underground Storage Tank needed to verify the attenuation of petroleum constituents. The schedule is to be submitted to the Executive Officer by January 4, 1999.
6. The dischargers shall submit a workplan for the complete horizontal and vertical definition of the separate phase petroleum product plume. The workplan needs to include discussion and recommendations on the need for installation of an interim remediation system to remove the product. The workplan is to be submitted to the Executive Officer by January 29, 1999.
7. The dischargers shall submit a report the Executive Officer by January 15, 1999 that details the technical justification for determining if a discharge to the environment has occurred in the areas listed below and whether that discharge threatens waters of the state.
  - a. Area 2 - Lubricant Storage/Boiler House/Fuel Storage, to include determining the source of elevated levels of zinc, lead, petroleum products, and PAHs in soils.
  - b. Area 3 - Waste Conveyor Trench located outside the mill building.
  - c. Area 4 - Glue Mix, Glue Storage, and Glue Spreading Area, that addresses the floor sump and all discharge locations for piping associated with the floor sump.
  - d. Area 9 - Fire Retardant Spray Booth
  - e. Area 10 - Former Dryer Area
8. The dischargers shall submit a workplan and time schedule for implementation to determine the complete vertical and horizontal extent of any contamination detected in any areas detailed in Provision 7 to the Executive Officer by March 15, 1999.
9. The dischargers shall submit a workplan and time schedule for implementation for the further investigation of the extent of groundwater contamination to the Executive Officer on or before January 4, 1999 for the following areas:
  - a. Area 1 - Headworks
  - b. Area 5, 6, and 8 - Woodlife Application, Water Repellent Tanks, Woodlife Spray Booth.

10. The dischargers shall implement the comprehensive storm water runoff sampling plan for the entire site by December 15, 1998. Areas to be sampled include the current leases and existing contaminated surface soils in contact with rainfall.
11. The dischargers shall submit a workplan to investigate the complete vertical and horizontal extent of soil and groundwater contamination and determine the source of the contamination in the vicinity of the underground storage tank located inside the mill building to the Executive Officer by January 28, 1999.
12. If for any reason, the dischargers are unable to perform any activity or submit any document in compliance with the schedule set forth herein or in compliance with any work schedule submitted in compliance with this Order and concurred in or revised by the Executive Officer, the dischargers may request, in writing, an extension of the time specified. The extension request must be submitted five days in advance of the due date and shall include justification for this delay including a description of the good faith effort performed to achieve compliance with the due date. The extension request shall also include a proposed time schedule with new performance dates for the due date in question and all subsequent dates dependent on the extension. An extension may be granted for good cause, in which case this Order will be automatically revised.

Ordered by \_\_\_\_\_

Lee A. Michlin  
Executive Officer

December 10, 1998